



#2

Substitute for Form 1449A/PTO (Modified) (use as many sheets as necessary)				Attorney Docket No.: 04259.P075		Application Number: 09/971,984	
				First Named Inventor: Eric Lais, et al.		<b>RECEIVED</b>  <b>MAR 08 2002</b> <b>Technology Center 2100</b>	
				Filing Date: October 4, 2001			
<b>U.S. PATENT DOCUMENTS</b>							
Exam. Initial*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		Number	Kind Code <sup>2</sup> (If known)				
T.W.		6,148,043		Fujimoto	11/14/2000		
		6,141,391		Morelos-Zaragoza, et al.	10/31/2000		
		6,138,265		Morelos-Zaragoza, et al.	10/24/2000		
		6,119,265		Hara	09/12/2000		
		5,974,095		Kitaura, et al.	10/26/1999		
		6,195,642	B1	Izumi, et al.	02/27/2001		
		6,122,325		Mogre, et al.	09/19/2000		
		6,049,573		Song	04/11/2000		
		6,005,640		Strolle, et al.	12/21/1999		

FOREIGN PATENT DOCUMENTS								
Exam. Initial*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD- YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (If known)				

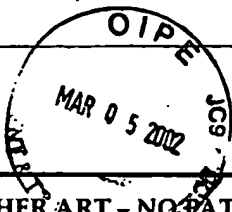
Examiner Signature		Date Considered	5/16/05
-----------------------	---	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard S.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

#2

Substitute for Form 1449A/PTO (Modified) (use as many sheets as necessary)		Attorney Docket No.: 04259.P075	Application Number: 09/971,984
		First Named Inventor: Eric Lais, et al.	<b>RECEIVED</b> MAR 08 2002 Technology Center 2100
		Filing Date: October 4, 2001	
<b>OTHER ART - NO PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Translation <sup>2</sup>
T.W.		JOHN G. PROAKIS, Block and Convolutional Channel Codes, Digital Communications, Fourth Edition, Pages 416 - 547, McGraw-Hill Series in Electrical and Computer Engineering, New York, NY.	
T.W.		"www.inventra.com/inventra/softcore/workshop/MultiRaFiltDes95/" MENTOR GRAPHICS, Hardware Design of Decimators/Interpolators, Pages 1-38.	
T.W.		"www.mentor.com/inventra/softcore/workshop/SDmod95/", MENTOR GRAPHICS, Introduction to AD/DA Converters, Pages 1-27.	
T.W.		<a href="http://www.mentor.com/inventra/softcore/workshop/SDHWDdes95/">http://www.mentor.com/inventra/softcore/workshop/SDHWDdes95/</a> MENTOR GRAPHICS, Design of the Decimation & Interpolation Filters, Pages 1-57.	
T.W.		<a href="http://www.mentor.com/inventra/softcore/workshop/Applications95/">http://www.mentor.com/inventra/softcore/workshop/Applications95/</a> , MENTOR GRAPHICS, Sigma Delta Converter Applications, Pages 1-5.	

Examiner Signature		Date Considered	5/16/05
--------------------	---	-----------------	---------

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

*(use as many sheets as necessary)*

of

<b>Application Number</b>	09/971,984
<b>Filing Date</b>	October 4, 2001
<b>First Named Inventor:</b>	Eric Lais et al.
<b>Art Unit</b>	2131
<b>Examiner Name</b>	Unassigned
<b>Attorney Docket Number</b>	004259. P075

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (If known)				
T.W.		US-	6,157,997		Oowaki et al.	
T.W.		US-	5,778,192		Schuster et al.	
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				

**RECEIVED**

JUN 16 2003

Technology Center 2100

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>o</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
EW		EP 0 762 777 A2		Uchiumi, Tadashi		

**Examiner  
Signature**

Date Considered

5/16/05

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Based on Form PTO/SB/08A (04-03) as modified by BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP on 05/09/03

[illegible]

Examiner Signature		Date Considered	5/16/05
-----------------------	---	--------------------	---------

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \*Applicant's unique citation designation number (optional). \*Applicant is to place a check mark here if English translation is attached.

Substitute for Form 1449/PTO

## INFORMATION DISCLOSURE

## STATEMENT BY APPLICANT

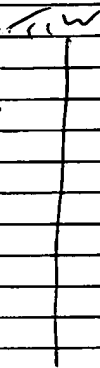
(use as many sheets as necessary)

## Complete if Known

Application Number	09/971,984
Filing Date	October 4, 2001
First Named Inventor:	Eric Lais
Art Unit	2131
Examiner Name	Not Yet Assigned
Attorney Docket Number	004259.P075

Sheet 1 of 2

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)				
		us-	4,015,238	3/29/1977	Robert Curtis Davis	
		us-	5,027,374	6/25/1991	Mark W. Rossman	
		us-	5,291,499 A	3/1/1994	Behrens et al.	RECEIVED
		us-	5,295,142	3/15/1994	Izumi Hatakeyama	
		us-	5,349,608	9/20/1994	Graham, et al.	AUG 11 2004
		us-	5,608,737 A	3/4/1997	Kimura, et al.	
		us-	5,907,586	5/25/1999	Katsuragawa, et al.	Technology Center 2100
		us-	6,189,126 B1	2/13/2001	Ulmer, et al.	
		us-	6,266,687 B1	7/24/2001	Leyonhjelm, et al.	
		us-	6,278,725 B1	8/21/2001	Rouphael et al.	
		us-	6,301,314 B1	10/9/2001	Murayama, Jun	
		us-	6,563,889 B1	5/13/2003	Shih, et al.	
		us-				
		us-				
		us-				

RECEIVED

AUG 11 2004

Technology Center 2100

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
[Signature]		WO	00/74264	A1	12/7/2000	Martone, Massimiliano		
		WO	01/59937	A2	8/16/2001	Qualcomm Inc.		

Examiner Signature	[Signature]	Date Considered	5/16/05
--------------------	-------------	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SENT FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for Form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Application Number	09/971,984
		Filing Date	October 4, 2001
		First Named Inventor:	Eric Lais
		Art Unit	2131
		Examiner Name	Not Yet Assigned
		Attorney Docket Number	004259.P075
Sheet	of	2	

RECEIVED

AUG 11 2004

Technology Center 2100

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
TW		JAMES TSUI, "Frequency Channelization, Digital Techniques for Wideband Receivers," Second Edition, Pages 363-396, 2001 Artech House, Inc., Norwood, MA	
		ZHENGDAO WANG and GEORGIOS B.GIANNAKIS, "Wireless Multicarrier Communications where Fourier Meets Shannon," Department of ECE, University of Minnesota, Minneapolis, MN., Pages 1-21.	
		E. VERRIEST, ISEN, "Implementing an Adaptive Noise Canceling System to Enhance Sonar Receiver Performance Using the TMS320C31 DSP," ESIEE, Paris, September 1996, Texas Instruments, Pages 1-24.	
		G.A. SHAW, R.A. FORD, J.C. ANDERSON, B.W. ZUERDNORFER, A.H. ANDERSON, "RASSP Benchmark 2 Technical Description," Massachusetts Institute Of Technology Lincoln Library, 153 pages total.	
		BREE, ET AL., "A Bit-Serial Architecture For A VLSI Viterbi Processor", Communications Systems Research Group, University of Saskatchewan, Saskatoon, IEEE, WESCANEX '88, 1988, pages 72-77.	
		BIVER, ET AL., "Architectural Design and Realization Of A Single-Chip Viterbi Decoder", Elsevier Science Publishers B.V., INTEGRATION, The VLSI Journal 8 (1989), October, No. 1, Amsterdam, NL, Pages 3-16.	
		BREE, ET AL., "A Modular Bit-Serial Architecture For Large Constraint-Length Viterbi Decoding", Communications Systems Research Group, University of Saskatchewan, Saskatoon, Canada, IEEE International Conference on Communications", 1990, pages 1501-1506.	
		CHOI, ET AL., "Viterbi Detector Architecture For High-Speed Optical Storage", 1997, IEEE TENCON - Speech and Image Technologies for Computing and Telecommunications, ASIC Center Corporate Technical Operations SAMSUNG Electronics, Vol. 1, Dec 1997, pages 89-92.	
		MARIE-LAURE BOUCHERET, IVAR MORTENSEN and HENRI FAVARO, "Fast Convolution Filter Banks For Satellite Payloads with On-Board Processing," IEEE Journal On Selected Areas In Communications, Vol. 17, No. 2, February 1999, pp. 238-247.	
		W.H. YIM and F.P. COAKLEY, "On-Board Processing For KA-Band Applications", University of Surrey, UK, Publication Date, February 11, 1993., XP 000458011, pp. 225-229.	
		HASHIDA MITSUYOSHI, "Hierachical Network Management System and Control Method for Network Management Information," Patent Abstracts of Japan, Publication No. 07226777	

Examiner Signature	Date Considered
	5/16/05

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English Translation is attached.  
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.  
 If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-788-9199) and select option 2.